

NOTICE:

"BEST AVAILABLE COPY"

**PORTIONS OF THE FOLLOWING
DOCUMENT ARE ILLEGIBLE**

The Administrative Record Staff

The following consists of field notes concerning the shipment of samples for Operable Unit 1 (OU 1). The notes are arranged in chronological order and contain the chain of custody numbers, the sample numbers, and in some cases the sample location and depth.

David Hyder (D&M) Jim Langsted (D&M) Dan Reeder (Stoller) and Keith Anderson (EG&G) met at Rocky Flats to discuss the shipment of radioactive soil samples taken in January 1993. The samples were located in the hot storage container next to the 901 Pad Area. The samples had been analyzed by Radiological Engineering for Am 241 by gamma spectroscopy. A conversion factor was used to determine Pu 239 concentration for shipping purposes.

The samples were removed from the hot storage area and taken to Woodward Clyde's core logging room in T 891 R which is equipped with a fume hood. An aliquot to be analyzed for radionuclides of the samples numbered EG&G 1 (sample depth 0 - 75) EG&G 6 (sample depth 4 - 5) and EG&G 15 (sample depth 9 - 10) was removed from the original sample container. EG&G 1 weighed 148 g EG&G 6 weighed 205g and EG&G 15 weighed 215g. This was done to keep total Pu 239 to less than 2 μ Ci per container as per the requirements for a limited quantity shipment per 49 CFR 173. The sample jars, containers and the core logging room were surveyed for removable and total (fixed plus removable) radiological contamination per EMRG 3.2 *Survey Requirements for Conditional and Unrestricted Use* and were found to be below the release limits.

The hot samples were prepared for shipment along with other samples that were left from OUI. Due to the laboratory requirements that a radiation (rad) screen (gross alpha and gross beta) sample must be shipped to the laboratory prior to any other samples the hot samples for radionuclides were not shipped. It was decided that aliquots would be removed from the EG&G samples for the rad screens and metals analysis the next day.

The OU1 samples listed on Chain Of Custody (COC) # ST ITLO0024 were shipped to IT Oakridge for radionuclide analysis. The OU1 rad screens listed on COC # ST ITSL0048 were shipped to IT St. Louis for gross alpha and gross beta. The OU1 samples listed on COC # ST ITSL0047 were shipped to IT St. Louis for general chemistry analysis with the exception of sample # SS10001ST (VOA Trip Blank) which was not found in the sample refrigerator.

Wednesday, May 5, 1993

The hot samples were once again removed from their storage area and taken to Woodward Clyde's core logging room (in T 891 R) with the fume hood. Aliquots were removed from EG&G 1 weighing 26 g (rad screen) and 110 g (metals) EG&G 6 weighing 33 g (rad screen) and 110 g (metals) and EG&G 15 weighing 26 g (rad screen) and 110 g (metals). The sample jars, containers and the core logging room was again surveyed for radiological contamination per EMRG 3.2 and was found to be below the release limits. The hot samples were returned to their storage area.

There was some concern that shipping the samples with numbers EG&G XX would cause a problem when the laboratory data was returned so Rocky Flats Environmental Database System (RFEDS) was contacted. Louise Martin (Stoller) at RFEDS was able to get sample numbers for location SS100493. Sample EG&G 1 became SS10001EG, EG&G-6 became SS10002EG and EG&G 15 became SS10003EG.

After getting the results from Tuesday's rad screens, the OU1 samples on COC # ST ITSL0049 were shipped to IT St. Louis for general chemistry analysis and the hot rad screens on COC # ST ITSL0050 were shipped to IT St. Louis for gross alpha and gross beta analysis.

Thursday May 6, 1993

The rad screen results from Wednesday did not arrive at the T 891 E fax that evening. The hot samples for radionuclides and metals were not shipped that day.

Friday May 7 1993

Cindy Gee (EG&G) had received the rad screen results and sent them to T 891 E. Dan Reeder (Stoller) found the VOA Trip Blank that was left out on Tuesday's shipments. The trip blank was put on COC # ST ITSL0052 and shipped to IT St. Louis for general chemistry analysis.

The hot metals COC # ST ITSL0051 were placed in three (3) separate shipping coolers due to Pu 239 content. Each cooler had the IT St. Louis (Earth City) address label taped to the cooler's top. The radionuclides COC # ST ITLO0026 were placed in three (3) separate coolers due to Pu 239 content. Each cooler had the IT Oakridge address label taped to the cooler's top. This arrangement was consistent with 49 CFR 173 requirements for limited quantity shipments.

A separate Federal Express airbill was filled out for each cooler with Saturday delivery requested. At the Federal Express office the Federal Express agent informed Dames & Moore that each airbill was charged extra for Saturday delivery and that they (Federal Express) was going to place the St. Louis shipping coolers on one airbill and the Oakridge shipping coolers on another. It wasn't discovered until Monday that the two airbills used by Federal Express both had the Oakridge address on them.

Monday, May 10 1993

Matt Garten (EG&G) informed Dames & Moore that some of the shipping coolers went to the wrong laboratory. The airbill numbers were faxed to him and he said to wait and he would find out what happened and let Dames & Moore know if we needed to do anything to assist in correcting the mistake.

Tuesday, May 11, 1993

Matt Garten contacted Dames & Moore and informed us that all six coolers had arrived in Oakridge and asked if we would call Federal Express and get it sorted out. Federal Express was called as requested and it was explained to them what had happened. They assured Dames & Moore that they would fix the problem.

Wednesday May 12, 1993

Federal Express called in the morning to inform Dames & Moore that the shipping coolers destined for St. Louis had arrived in St. Louis and had been signed for. Matt Garten was called and informed of the same.

Summary

The hot samples were shipped meeting all DOT requirements for limited quantity shipments. Sample numbers were obtained consistent with RFEDS requirements. The rad screen were sent, evaluated and the samples were shipped to the laboratory. The Stoller samples were shipped. One trip blank was overlooked and shipped at a later date. Federal Express mixed up several shipping coolers but straightened it out without exceeding the holding times.

Attachment

See attached notes from Stoller regarding the collection of samples from locations SS100293, SS100393 and SS100493.

July 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632,

SSX1-9 5/16/31

from Storage Drums

1000 DR filled of THS

1991

R. Curry - RPT

N. Davis - FGE

J. Anderson - FGE

K. Anderson - FGE

D. Reider - Stoller

Lynni - Stoller

1010 P. Curry Monitored

SS100193 - 7000 CPM

SS100293 - 4000 CPM

SS100493 - 2500 CPM

SS100493 will be sampled

but this location is potentially contaminated w/ Pu.

5/16/31

SS100193

SS100293

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